

SECTION 16485 CONTACTORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawing and general provisions of the Contract, including General and Supplementary Conditions, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. General purpose contactors.
 - 2. Lighting contactors.
 - 3. Enclosures.
 - 4. Accessories.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Section 16160, Panelboards.
 - 2. Section 16196, Electrical Identification.

1.3 REFERENCES

- A. National Electrical Manufacturers Association (NEMA)
 - 1. NEMA ICS 2-93, Industrial Control Devices, Controllers, and Assemblies.
 - 2. NEMA ICS 6-93, Enclosures for Industrial Controls and Systems.
- B. National Fire Protection Association (NFPA)
 - 1. NFPA 70-99, National Electrical Code.

1.4 SUBMITTALS

- A. Products furnished from listed manufacturers are pre-approved but still require submittal.
- B. Submit proposed substitutions for approval in accordance with General and Supplementary Conditions.

1.5 QUALITY ASSURANCE

- A. NFPA Compliance: Equipment and components shall be designed, fabricated, and installed in compliance with NFPA 70A.
- B. UL and NEMA Compliance: Provide components required as part of conduit systems that are listed and labeled by UL and comply with applicable NEMA standards.
- C. Coordination: Coordinate layout and installation of conduit systems with piping and ductwork and with other installations.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver conduit to job site in 10-ft lengths. Inspect for damage.
- B. Protect conduit from corrosion and entrance of debris by storing above grade. Provide appropriate covering in a manner to ensure installation of materials in new condition.

- C. Protect PVC-coated conduit and PVC conduit from sunlight.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Allen Bradley.
- B. Cutler Hammer/Westinghouse.
- C. General Electric.
- D. Square D.

2.2 GENERAL PURPOSE CONTACTORS

- A. Nonmotor loads: NEMA ICS 2; electrically held general purpose magnetic contactor without overload protection:
- B. Operating Coils: 120 V, 60 Hz.
 - 1. Mount a 480-120-V, single-phase, 60-Hz control transformer within the enclosure when used on 480 V system.
 - 2. Fuse X1 terminal of control transformer secondary.
 - 3. Ground X2 terminal of control transformer secondary.
- C. Size: NEMA ICS 2, Size as indicated.
- D. Contacts: 3 pole, 600 V, 60 Hz.
- E. Provide solderless pressure wire terminals.

2.3 LIGHTING CONTACTORS

- A. Description: NEMA ICS 2, magnetic lighting contactor.
- B. Configuration: Mechanically held.
- C. Coil Voltage: As indicated.
- D. Poles: As indicated.
- E. Contact Rating: as indicated.
- F. Provide bus terminals suitable for mounting in panelboard.

2.4 ENCLOSURE

- A. Type: NEMA ICS 6, Type 1, unless otherwise indicated.

2.5 ACCESSORIES

- A. Selector Switch: ON/OFF/AUTOMATIC.
- B. LED Type Indicating Light: RED.

- C. Auxiliary Contacts: One normally open and one normally closed convertible.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install in accordance with manufacturer's instructions.

3.2 FIELD QUALITY CONTROL

- A. Verify wiring connections are tight.
- B. Verify movable contact assemblies are not binding and are free to move.
- C. Verify coil voltage is correct.
- D. With load connected, energize and observe load current for each circuit installed.

END OF SECTION 16485